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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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09/303,409

05/03/1999

SANDRA FREEDMAN FELDMAN

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EXAMINER

FERRIS III, FRED O

ART UNIT

PAPER NUMBER

2123

DATE MAILED: 01/21/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

09/303,409

Applicant(s)

FELDMAN ET AL.

Examiner

Fred Ferris

Art Unit

2123

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 05 March 1999.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-18 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-5, 7, 9-13, 15, 17 and 18 is/are rejected.
- 7) ☒ Claim(s) 6, 8, 14 and 16 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 07 January 2000 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.  
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

## Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All b) ☐ Some \* c) ☐ None of:  
1. ☐ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
\* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).  
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 4, 5.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

### **DETAILED ACTION**

1. *Claims 1-18 have been presented for examination. Claims 1-5, 7, 9-13, 15, 17, and 18 have been rejected. Claims 6, 8, 14, and 16 are objected to.*

### ***Drawings***

2. *Formal drawings submitted on 7 January 2000 have been approved by the examiner pending review by the draftsman.*

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

3. *Claims 1-4, 9-12, 17, and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent 4,920,385 issued to Clark et al, in vi w of U.S.*

**Patent 5,528,368 issued to Lewis et al, in further view of U.S. Patent 5,149,547 issued to Gill.**

Independent claims 1, 9, and 17 are drawn to:

A system, method, to **identify defects** in **plastic parts** comprising:

A **molding tool** for **producing plastic parts**

Spatially-resolved **spectrometer** for **obtaining data readings** via reflected light

**Computer device** for **processing, analyzing, and quantifying** data

Regarding independent claims 1, 9, and 17: Clark teaches an electro optical system for **identifying defects** in manufactured materials including **plastic parts**.

(Abstract, Summary of Invention, CL1-L13, CL2-L3-8, Figs. 3-10)

Clark does not explicitly teach the use of a spatially-resolved spectrometer to obtain data readings of reflected light.

Lewis teaches the use of a **spatially-resolved spectrometer** and spectroscopic imaging techniques for collecting **data readings of reflected light** from **material samples**. Lewis further discloses the use of computer for **analyzing** and **processing the data readings**. (Abstract, Summary of Invention, CL1-L20, 32, 54, CL2-L41-64, CL40-L52, CL5-L3, 7, 47, 52, CL6-L11, 20, CL8-L38-58, CL10-L23)

Clark further does not teach the use of a molding tool for producing plastic parts.

Gill teaches a **molding tool** for producing **plastic parts** comprising a **cavity** and **gate** (multiple) where plastic is **extruded** to produce plastic parts. (Abstract, Summary of Invention, CL2-L26, 43, 57-6, CL7-42, Fig. 2)

It would have been obvious to one having ordinary skill in the art at the time the claimed invention was made to modify the teachings of Clark relating to an electro

optical system for **identifying defects** in manufactured materials including **plastic parts**, with the teachings of Lewis relating to the use of a **spatially-resolved spectrometer** and spectroscopic imaging techniques for collecting **data readings** of **reflected light** from **material samples**, and to further modify the teaching of Clark with the teachings of Gill relating to a **molding tool** for producing **plastic parts** comprising a **cavity** and **gate** (multiple) where plastic is **extruded** to produce plastic parts, to realize the claimed invention. An obvious motivation exists, since as referenced in prior art, the use of spatially-resolved spectrometer techniques provides improved and reliable detection of defects in manufactured materials.

Regarding dependent claims 2-4 and 10-12, and 18: As previously cited, Gill teaches a **molding tool** for producing **plastic parts** comprising a **cavity** and **gate** (multiple) where plastic is **extruded** to produce plastic parts. (Abstract, Summary of Invention, CL2-L26, 43, 57-6, CL7-42, Fig. 2) Further, the **extruded plastic** parts conform to the cavity which obviously can have holes, boss, grill or ribs (any angle) and include flat, positive and negative cavity surface shapes (CL8-L33).

**Claims 5, 7, 13, and 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent 4,920,385 issued to Clark et al, in view of U.S. Patent 5,528,368 issued to Lewis et al, in further view of U.S. Patent 5,149,547 issued to Gill, and in view of Official Notice.**

Regarding dependent claims 5, 7, 13, and 15: Official Notice is given that his group of claims merely addresses limitations relating to obvious and well known techniques that are commonly used in signal data processing relating to **filtering by threshold value, data compression, identifying and limiting by minimum and maximum data points** (limiting above/below threshold value), and **signal** identification (**matching**) by shape, width, slope, curve, etc. and, hence, would have been used by one skilled in the art to realize the claimed invention.

#### **Allowable Subject Matter**

4. Claims 6, 8 and 14, 16, are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

#### **Conclusion**

5. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure, careful consideration should be given prior to applicant's response to this Office Action.

U.S. Patent 6,002,480 issued to Izatt et al teaches the use of spectrometers in material examination.

U.S. Patent 5,220,403 issued to Batchelder et al teaches the use of spectrometers in material examination.

*U.S. Patent 6,441,901 issued to McFarland et al teaches the use of spectrometers in material examination.*

*U.S Patent 5,053,173 issued to Stict teach a molding tool with cavity and gate for extruded plastic parts.*

*"Thermal desorption behavior of absorbed material on wafer surfaces" T. Jimbo, IEEE 0-7803-3752-2/97, 1997 teaches defect detection using spectrometry.*

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Fred Ferris whose telephone number is 703-305-9670 and whose normal working hours are 8:30am to 5:00pm Monday to Friday.

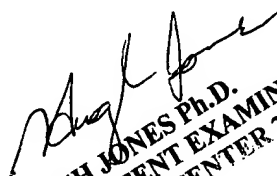
Any inquiry of a general nature relating to the status of this application should be directed to the group receptionist whose telephone number is 703-305-3900.

The Official Fax Numbers are:

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